IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

APPELLANT'S MAIN BRIEF ON APPEAL

In re Patent Application of:	)	
	)	Group Art Unit: 2621
Mototsugu Abe, et al.	)	
	)	Examiner: Vent, Jamie J.
Application No. 09/843,629	)	
	)	Confirmation No.: 9203
Filed: April 26, 2001	)	
	)	Attorney Docket No. 09792909-5003
For: SIGNAL PROCESSING DEVICE AND SIGNAL PROCESSING METHOD	)	

Mail Stop Appeal Brief - Patents
Hon. Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

Appellant submits herewith Appellant's Main Brief on Appeal under 37 C.F.R. §41.37 in support of the Notice of Appeal mailed on September 16, 2008. The Commissioner is hereby authorized to charge the amount of $510.00 for the requisite filing fee for filing the Main Brief on Appeal to the Appellant's Attorneys' credit card. Credit Card payment for the fee is made via the electronic submission process.

The Commissioner is hereby authorized to charge any deficiency in fees associated with this communication or credit any overpayment to Deposit Account No. 19-3140.

Respectfully Submitted,

Dated: September 18, 2008

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Dear Sir:

In accordance with the provisions of 37 C.F.R. §41.37, Appellant submits this Main Brief on Appeal pursuant to the Notice of Appeal mailed on September 16, 2008 in the above-identified application.

I. REAL PARTY IN INTEREST:

The real party in interest in the present appeal is the Assignee, Sony Corporation. The assignment was recorded in the U.S. Patent and Trademark Office at Reel 012101, Frame 0736.

II. RELATED APPEALS AND INTERFERENCES:

Appellant is not aware of any related appeals or interferences.

III. STATUS OF CLAIMS:

Claims 1-12, 14-38 and 40-55 are pending in the application. Claims 13 and 39 are cancelled.

Applicants filed a June 24, 2008, Response To The Final Office Action dated June 12, 2008 ("the June 24, 2008, Response"). The June 24, 2008, Response included an amendment to claim 1 while the other pending claims 2-12, 14-38 and 40-55 remained as previously presented. An Advisory Action dated August 4, 2006, stated that the proposed amendments in the June 24, 2008, Response would be entered for purposes of appeal but did not place the application in condition for allowance. Thus, the present appeal is directed to claims 1-12, 14-38 and 40-55 as set forth in the June 24, 2008, Response.

A copy of claims 1-12, 14-38 and 40-55 is appended hereto as the Claims Appendix.

The status of the claims on appeal is as follows:

A) Claims 1-12, 14-38 and 40-54 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Nafeh* (US 5,343,251) ("*Nafeh* ") in view of *Zigmond et al.* (US 6,698,020) in view of *Merriman et al.* (US 2003/0028433).

B) Claim 55 was added in a March 4, 2008, Response to the Office Action dated November 1, 2007 for the present patent application. However, the Examiner did not address claim 55 in the Final Office Action dated June 12, 2008, or in the Advisory Action dated August 4, 2008.

IV. STATUS OF AMENDMENTS:

As previously noted in the "Status Of Claims" section, the Advisory Action dated August 4, 2006, stated that the proposed amendments in the June 24, 2008, Response would be entered for purposes of appeal but did not place the application in condition for allowance. Accordingly, all amendments prior to the filing of the Notice of Appeal have been entered in this application.

Applicants filed an Amendment After Notice of Appeal dated September 17, 2008, to correct the dependency of claims 22 and 48. In the Amendment After Notice of Appeal, claims 22 and 48 (which referred to canceled claims 13 and 39) were amended to depend from independent claims 1 and 27, respectively. Thus, claims 13 and 39 as amended are now in better form for consideration on appeal.

V. SUMMARY OF CLAIMED SUBJECT MATTER:

Claims 1-12, 14-38 and 40-55 are currently pending. Claims 1, 27 and 55 are the only pending independent claims under consideration. Claims 2-12, 14-26 and 28-54 depend directly or indirectly from claims 1 or 27. Independent claims 1, 27 and 55 are summarized below. It is possible that elements of dependent claims 2, 18, 22, 23, 24, 25 and 26 that are not already described with reference to claim 1 may invoke 35 U.S.C. §112, paragraph 6. Thus, claims 2, 18, 22, 23, 24, 25 and 26 are also described below.

Claim 1:

It is possible that elements of claim 1 may be interpreted to invoke 35 U.S.C. §112, paragraph 6. Therefore, the structure(s) of each element performing a claimed function is identified with respect to the discussion of the respective element below.

With respect to independent claim 1 and referencing the exemplary embodiment depicted in Figure 1 for illustrative purposes, Applicants claim a signal processing device comprising a commercial message section detecting means (202) for detecting a commercial message section (202a) from an input signal (200a) including at least the commercial message section (202a) and the remaining signal section on a time division basis. (See, U.S. Pat. Pub. No. 2002/0012105, at paras. [0010], [0046] and [0047]). In addition, the signal processing device includes a commercial message extracting means (201) for extracting a commercial message (201a) in the commercial message section (202a) from the input signal (200a) in accordance with a result of the detection by the commercial message section detecting means (202). (See, *Id.* at paras. [0010] and [0048]). The signal processing device also includes a recording means (205) for recording each signal extracted from the input signal (200a) by the commercial message extracting means (201) and an index information extracting means (206) for extracting information from the commercial message section (202a) to be used as a user-selectable index (206a) representing the recorded commercial message. (See, *Id.* at paras. [0010], [0048]-[0049] and [0082]-[0090]). The information extracted from the commercial message section (202a) and associated with said commercial message is one of a starting image, a cut point image, a starting sound or an ending sound. (See, *Id.* at paras. [0083]-[0090]). The signal processing device further includes a display means (208) for displaying said index. (See, *Id.* at paras. [0082]-[0092]).

Claim 2:

It is possible that elements of dependent claim 2 may be interpreted to invoke 35 U.S.C. §112, paragraph 6. Referring to Fig. 1 as an illustrative example, claim 2 depends from claim 1 and requires that the signal processing device of claim 1 have a characteristic value extracting means (203) for extracting a characteristic value characterizing the commercial message from the detected commercial message section (202a). (See, U.S. Pat. Pub. No. 2002/0012105, at paras. [0055]-[0056], [0073] and [0076]). The recording means (205) records each characteristic value of the commercial message in association with the commercial message. (See, *Id*. at paras. [0076]).

Claim 18:

It is possible that elements of dependent claim 18 may be interpreted to invoke 35 U.S.C. §112, paragraph 6. Referring to Fig. 1 as an illustrative example, claim 18 depends from claim 2 and requires that the signal processing device of claim 2 have a comparing means (204) for comparing the characteristic values respectively characterizing two commercial messages recorded by said recording means (205) and discarding one of the recorded two commercial messages when the characteristic values of the two commercial messages are determined to be substantially the same. (See, U.S. Pat. Pub. No. 2002/0012105, at paras. [0108]-[0145]).

Claim 22:

It is possible that elements of dependent claim 22 may be interpreted to invoke 35 U.S.C. §112, paragraph 6. Referring to Fig. 1 as an illustrative example, claim 22 depends from claim 1 and requires that, within the signal processing device of claim 22, the user-selectable index is one of a plurality of user-selectable indices each of which correspond to an extracted signal from said input signal (200a) and the display means (208) displays each of said indices. (See, U.S. Pat. Pub. No. 2002/0012105, at paras. [0082]-[0098], [0116]-[0130] and Figs. 7 &12).

The signal processing device of claim 22 further comprises an index information selecting means (207 and/or 802) for selecting one index from the displayed plurality of indices and a retrieving means (801) for retrieving one of the recorded extracted signals corresponding to the selected one index. (See, U.S. Pat. Pub. No. 2002/0012105, at paras. [0093]-[0098], Fig. 8).

Claim 23:

It is possible that elements of dependent claim 23 may be interpreted to invoke 35 U.S.C. §112, paragraph 6. Referring to Fig. 1 as an illustrative example, claim 23 depends from claim 2 and requires that the signal processing device of claim 2 have a retrieving means (801 and/or 204) for retrieving one of the recorded extracted signals substantially agreeing with said commercial message from said recording means (205), using said commercial message in a part of the section or in the entire section or a characteristic value characterizing the commercial message as a retrieving condition. (See, U.S. Pat. Pub. No. 2002/0012105, at paras. [0093]-[0098] and [0116]-[0130], Figs. 8 and 13).

Claim 24:

It is possible that elements of dependent claim 24 may be interpreted to invoke 35 U.S.C. §112, paragraph 6. Referring to Fig. 1 as an illustrative example, claim 24 depends from claim 2 and requires that the signal processing device of claim 2 further comprise a retrieving means (801 and/or 204) for retrieving one of the recorded extracted signals substantially agreeing with said commercial message from said recording means (205), using a part or all of said commercial message or a characteristic value characterizing the commercial message as retrieving condition. (See, U.S. Pat. Pub. No. 2002/0012105, at paras. [0093]-[0098] and [0116]-[0130], Figs. 8 and 13).

Claims 25:

It is possible that elements of dependent claim 25 may be interpreted to invoke 35 U.S.C. §112, paragraph 6. Referring to Fig. 1 as an illustrative example, claim 25 depends from claim 1 and requires that the signal processing device of claim 1 further comprise a measuring means (204) for measuring the number of times and/or the hours of appearances of a same commercial message. (See, U.S. Pat. Pub. No. 2002/0012105, at paras. [0122]-[0135]).

Claim 26:

It is possible that elements of dependent claim 26 may be interpreted to invoke 35 U.S.C. §112, paragraph 6. Referring to Fig. 1 as an illustrative example, claim 26 depends from claim 1 and requires that the signal processing device of claim 1 further comprise a measuring means (204) for measuring the number of times and/or the hours of appearances of

similar commercial message. (See, U.S. Pat. Pub. No. 2002/0012105, at paras. [0122]-[0135]).

Claim 27:

Referring to Figs. 1-3 as an illustrative example, claim 27 claims a signal processing method (as performed, for example, by the signal processing device of Fig. 1). The method comprises the steps of:

detecting a commercial message section (202a) from an input signal (200a) containing at least the commercial message section and the remaining signal section on a time division basis (See, U.S. Pat. Pub. No. 2002/0012105, at paras. [0046]-[0053], Fig. 3, step S222);

extracting a commercial message of the commercial message section (202a) out of the input signal (200a) in accordance with the result of the detection of the commercial message section (202a) (See, U.S. Pat. Pub. No. 2002/0012105, at paras. [0046]-[0053], Fig. 3, step S223);

recording each commercial message extracted from the input signal (200a) by the commercial message extracting means (See, U.S. Pat. Pub. No. 2002/0012105, at paras. [0046]-[0053], Fig. 3, step S224);

extracting information from said commercial message section to be used as a user-selectable index representing said recorded commercial message, the information extracted from said commercial message section and associated with said commercial message being one of a starting image, a cut point image, a starting sound or an ending sound (See, U.S. Pat. Pub. No. 2002/0012105, at paras. [0082]-[0092] and [0100], Fig. 9, step S242); and

displaying said index (See, U.S. Pat. Pub. No. 2002/0012105, at paras. [0082]-[0092] and [0100]-[0101], Fig. 9, step S243).

Claim 55:

It is possible that elements of claim 55 may be interpreted to invoke 35 U.S.C. §112, paragraph 6. Therefore, the structure(s) of each element performing a claimed function is identified with respect to the discussion of the respective element below.

With respect to independent claim 55 and referencing the exemplary embodiment depicted in Fig. 1 for illustrative purposes, Applicants claim a signal processing device comprising a first signal section detecting means (202) for detecting a first signal section (202a) from an input signal (200a) including at least the first signal section (202a) and the remaining signal section on a time division basis. (See, U.S. Pat. Pub. No. 2002/0012105, at paras. [0010], [0046] and [0047]). In addition, the signal processing device includes a first signal extracting means (201) for extracting a first signal (e.g., a commercial message) in the first signal section (202a) from the input signal (200a) in accordance with a result of the detection by the first signal section (202a). (See, *Id.* at paras. [0010] and [0048]). The signal processing device also includes a recording means (205) for recording each signal extracted from the input signal (200a) by the first signal extracting means (201). (See, *Id.* at paras. [0010], [0048]-[0049]). The recording means (205) includes a characteristic comparing means (204) for comparing the first signal with each signal stored in the recording means (205) and, in response to determining that the first signal is the same as another signal stored in the recording means (205), removing from the recording means (205) one of the first signal or the other signal. (See, *Id.* at paras. [0108]-[0145]). The signal processing device further includes an index information extracting means for extracting information from said first signal section to be used as a user-selectable index representing said recorded first signal (See, *Id.* at paras. [0082]-[0090]) and a display means (208) for displaying said index. (See, *Id.* at paras. [0082]-[0092]).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL:

The ground of rejection to be reviewed on appeal are as follows:

A) Claims 1-12, 14-38 and 40-54 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Nafeh* (US 5,343,251) ("*Nafeh* ") in view of *Zigmond et al.* (US 6,698,020) in view of *Merriman et al.* (US 2003/0028433).

B) Claim 55 was added in a March 4, 2008, Response to the Office Action dated November 1, 2007 for the present patent application. However, the Examiner did not address claim 55 in the Final Office Action dated June 12, 2008, or in the Advisory Action dated August 4, 2008. Thus, Applicants submit that the Examiner has not presented any formal grounds for rejecting claim 55.

VII. ARGUMENT:

As set forth below, claims 1-12, 14-38 and 40-54 are not unpatentable under 35 U.S.C. § 103(a) based on the *Nafeh, Zigmond* and *Merriman* references. Appellant respectfully submits that the Examiner's assertions are incorrect as a matter of fact and law. In addition, although the Examiner did not expressly reject claim 55 based on these references, Applicants respectfully submit that claim 55 is also patentable over the *Nafeh, Zigmond* and *Merriman* references. Thus, for the reasons set forth below, Appellant respectfully requests that this Board reverse the rejections of claims 1-12, 14-38 and 40-55 under 35 U.S.C. § 103.

A. Claims 1-12, 14-38 and 40-54 are not rendered obvious by *Nafeh* in view of *Zigmond* and *Merriman*

Appellant respectfully submits that *Nafeh* in view of *Zigmond* and *Merriman* fails to disclose or suggest each and every limitation of claims 1-12, 14-38 and 40-55.

With respect to independent claim 1 and referencing the exemplary embodiment depicted in Figure 1A for illustrative purposes, Applicants claim a signal processing device having the following limitations:

> *a commercial message section detecting means (202) for detecting a commercial message section (202a) from an input signal (200a) including at least the commercial message section and the remaining signal section on a time division basis;*
>
> *a commercial message extracting means (201) for extracting a commercial message (201a) in the commercial message section from the input signal in accordance with a result of the detection by the commercial message section detecting means (202);*
>
> *a recording means (205) for recording each signal extracted from the input signal by the commercial message extracting means (201);*
>
> *an index information extracting means (206) for extracting information from said commercial message section to be used as a user-selectable index(206a) representing said recorded commercial message,* the information extracted from said commercial message section and associated with said commercial message being one of a starting image, a cut point image, a starting sound or an ending sound*; and*
>
> *a display means (208) for displaying said index.*

The Examiner, in rejecting claim 1, asserts that *Nafeh* teaches "a commercial message section detecting means," "a commercial message extracting means," and "a recording means for recording each signal extracted from the input signal by the commercial message extracting means" as taught by Applicants and recited in claim 1. (See, June 12, 2008 Final Office Action,

at pgs. 2-3 and August 4, 2008 Advisory Action, at pg. 2). Applicants respectfully disagree with the Examiner's assertion.

Nafeh discloses an apparatus 10 for discerning a commercial message from a program message in an input signal 12 based on learned signal patterns associated with different classes of commercial and program messages so that the commercial messages can be eliminated (or attenuated) before being recorded on a VCR or displayed on a TV. (See *Nafeh*, Col. 2:38 - Col. 3:57; Col. 5:29 - Col. 6:21; Col. 7:14-46). In particular, *Nafeh* discloses that "[t]he single output of the network [classifier 24 of apparatus 10] is used to make a decision as to whether the broadcast [or input signal 12] is either a commercial or a program, following a detected transition [in the broadcast or input signal 12]." (See *Nafeh*, Col. 6:18-21). No where does *Nafeh* teach or suggest a recording means for recording each commercial message extracted from an input signal (or program segment) so that the commercial messages may be selectively indexed.

In the Advisory Action, the Examiner points to Column 1 Lines 33-35 and 65-67, Column 2 Lines 60-67, Column 3 Lines 1-17, and Column 7 Lines 34-57 in *Nafeh* for support that *Nafeh* discloses this "recording means" limitation, stating that the *Nafeh* "system allows the ability to record or display a program or commercial based on objects to be classified." (See, August 4, 2008 Advisory Action, at pg. 2).

Applicants respectfully submit that the Examiner is using impermissible hindsight in view of Applicants' invention as claimed in claim 1 in order to mischaracterize the teachings of *Nafeh* to cover this claim 1 "recording means" limitation. *Nafeh* specifically teaches away from recording commercial messages that may be detected in a broadcast program signal. For example, in Column 7 Lines 34-57 of *Nafeh* that the Examiner points to support, *Nafeh* expressly teaches that "[d]uring commercials, the pause signal is active." Thus, *Nafeh* teaches away from a signal processing device having, among other limitations, "*a recording means for recording each signal extracted from the input signal by the commercial message extracting means*" as recited in claim 1.

In addition, the Examiner acknowledges that *Nafeh* fails to disclose "*an index information extracting means for extracting information from said commercial message section to be used as a user-selectable index representing said recorded commercial message" and "a display means for displaying said index."* The Examiner asserts that *Zigmond* and *Merriman* in combination teach these limitations that are missing from *Nafeh*. (See, June 12, 2008 Final Office Action, at pgs. 3-4 and August 4, 2008 Advisory Action, at pgs. 2-3).

Applicants respectfully disagree. Moreover, in the June 12, 2008 Final Office Action, the Examiner overlooked another limitation of claims 1 and 27. In particular, claims 1 and

27 each require that "the information extracted from said commercial message section and associated with said commercial message [is] one of a starting image, a cut point image, a starting sound or an ending sound." In the August 4, 2008 Advisory Action, the Examiner fails to specifically address this limitation. Applicants submit that *Nafeh*, *Zigmond* and *Merriman*, alone or in combination, fail to disclose or suggest this limitation, which is a requirement of the claimed "index information extracting means."

Again, the Examiner acknowledges that *Nafeh* fails to disclose the "index information extracting means" as required by claim 1. In the Final Office Action, the Examiner asserts that *Zigmond* (as described in Col. 10 lines 15+ and seen in Figure 5) teaches a system wherein commercial messages are detected, extracted, recorded, indexed and played back to the user based on detection of the commercial message in a broadcast stream.

Applicant respectfully disagrees. *Zigmond* teaches a system (i.e., Ad insertion device 80) for receiving and storing advertisements (i.e., Ads in "Ad Delivery" in Fig. 5) that may subsequently be inserted into an advertisement slot of a video programming feed (i.e., "Programming Delivery" in Fig. 5) according to advertisement selection criteria combined with viewer and system information. (See, *Zigmond*, Abstract, Col. 10, lines 15-35; Col. 13, lines 20-27; Fig. 5). No where does *Zigmond* disclose or suggest that the "Ad insertion device" works in reverse to detect commercial messages in a broadcast video programming feed. The Examiner fails to address this argument in the August 4, 2008, Advisory Action.

Furthermore, Applicants submit that *Zigmond* fails to teach "*an index information extracting means for extracting information from said commercial message section* [*of a programming input signal*] *to be used as a user-selectable index representing said recorded commercial message,* [*where*] *the information extracted from said commercial message section and associated with said commercial message being one of a starting image, a cut point image, a starting sound or an ending sound*" as required by claim 1.

Applicant also asserts that *Merriman* (alone or in combination with *Nafeh, Zigmond*, or any other cited reference) also fails to disclose or suggest "an index information extracting means" as required by claim 1 (and as similarly required in method claim 27). *Merriman* discloses an advertising server having a web page accessible by a user's web browser. The web page has an embedded reference to an object of a process of the advertising server that is contacted by the user's browser to provide the advertising image or info to appear on the accessed web page. The advertising server process uses the address information passed by the user's browser to determine the advertising image or info that is to be provided to the user's web browser. (See, *Merriman*, paragraphs 0012-0013; Figs. 2 & 3). Assuming

arguendo that the web page as sent to the user's web browser corresponds to an "input signal including at least the commercial message section and the remaining signal section on a time division basis," the embedded reference in the web page is not extracted from the web page to be used as a user-selectable index representing the recorded commercial message as required by claim 1.

Moreover, in the August 4, 2008 Advisory Action, the Examiner points to Figure 2 and paragraphs 0012-0013 of *Merriman* for support that *Merriman* discloses a system that provides a user selectable index from the commercial message section of the input signal as required by claim 1. The portions of *Merriman* that the Examiner points to for support actually discloses "an advertising server" that provides web advertisements based on user information, which is unlike a user selectable index that corresponds to information extracted from a "commercial message section" as required by claim 1. Thus, *Merriman* fails to teach or fairly suggest the "index information extracting means" limitation as recited in claim 1.

Furthermore, in both the June 12, 2008 Final Office Action and the August 4, 2008 Advisory Action, the Examiner failed to point to any support in *Merriman* for "*an index information extracting means"* where "*the information extracted from said commercial message section and associated with said commercial message being one of a starting image, a cut point image, a starting sound or an ending sound"* as required by claim 1.

Thus, for at least the foregoing reasons, Applicants submit that *Nafeh, Zigmond* and *Merriman* (alone or in combination) fail to teach or suggest all the limitations of independent claim 1. Accordingly, Applicants respectfully request that the rejection of claims 1 and 27 be withdrawn.

Independent claim 27, although of a different scope from independent claim 1, includes recitations similar to independent claims 1. Accordingly, Applicants submit that *Nafeh, Zigmond* and *Merriman* (alone or in combination) fail to teach or suggest all the features of independent claim 27 for at least the reasons given above and respectfully request that the rejection of claim 27 under 35 U.S.C. § 103(a) be withdrawn.

Claims 2-12, 14-26, and 53 depend directly or indirectly from claim 1 and should be deemed allowable for at least the same reasons as claim 1. Claims 28-38, 40-52, and 54 depend from claim 27 and should be deemed allowable for at least the same reasons as claim 27. Accordingly, Applicants respectfully request that the rejection to the dependent claims 2-12, 14-26, 28-38, and 40-54 be withdrawn.

B. Claim 55 is also not disclosed or rendered obvious by *Nafeh Zigmond* and *Merriman,* each alone or in combination

Regarding claim 55, as previously noted, the Examiner did not address claim 55, which was added in the March 4, 2008, Response to the Office Action dated November 1, 2007. Accordingly, Applicants respectfully request that the finality of this office action with at least regard to claim 55 be withdrawn so that the Examiner may consider claim 55 as previously presented.

Independent claim 55, although of a different scope from independent claim 1, includes recitations similar to independent claims 1. Thus, Applicants submit that claim 55 should also be deemed allowable for at least the same reasons as given for claim 1 above.

VIII. CONCLUSION:

For the foregoing reasons, Appellant respectfully submits that the rejections posed by the Examiner are improper as a matter of law and fact. Accordingly, Appellant respectfully requests the Board reverse the rejections of claims 1-12, 14-38 and 40-55.

Respectfully Submitted,

Dated: September 18, 2008

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CLAIMS APPENDIX

1. (Previously Presented) A signal processing device comprising:

commercial message section detecting means for detecting commercial message section from an input signal including at least the commercial message section and the remaining signal section on a time division basis;

a commercial message extracting means for extracting a commercial message in the commercial message section from the input signal in accordance with a result of the detection by the commercial message section detecting means;

a recording means for recording each commercial message extracted from the input signal by the commercial message extracting means;

an index information extracting means for extracting information from said commercial message section to be used as a user-selectable index representing said recorded commercial message, the information extracted from said commercial message section and associated with said commercial message being one of a starting image, a cut point image, a starting sound or an ending sound; and

a display means for displaying said index.

2. (Previously Presented) The signal processing device according to claim 1, further comprising a characteristic value extracting means for extracting a characteristic value characterizing the commercial message from the detected commercial message section, wherein said recording means records each characteristic value of the commercial message in association with the commercial message.

3. (Previously Presented) The signal processing device according to claim 1, wherein said commercial message section detecting means detects said commercial message section from said input signal on the basis of a characteristic pattern of the commercial message appearing in said input signal at predetermined time intervals and a characteristic value reflecting the probability of the commercial message appearing in the input signal.

4. (Previously Presented) The signal processing device according to claim 1, wherein said commercial message section detecting means detects said commercial message section on the basis of predetermined guide information which is prepared corresponding to said input signal.

5. (Previously Presented) The signal processing device according to claim 2, wherein said characteristic value characterizing said commercial message is amplitude of the signal in the commercial message section.

6. (Previously Presented) The signal processing device according to claim 2, wherein said characteristic value characterizing said commercial message is a spectrum of the signal in the commercial message section.

7. (Previously Presented) The signal processing device according to claim 2, wherein said characteristic value characterizing said commercial message is a linear prediction coefficient of the signal in the commercial message section.

8. (Previously Presented) The signal processing device according to claim 2, wherein said characteristic value characterizing said commercial message is a histogram of a predetermined component of the signal in the commercial message section.

9. (Previously Presented) The signal processing device according to claim 2, wherein said characteristic value characterizing said commercial message is mean value of a predetermined component of the signal in the commercial message section.

10. (Previously Presented) The signal processing device according to claim 2, wherein said characteristic value characterizing said commercial message is a difference between two predetermined signal components of the commercial message in the commercial message section.

11. (Previously Presented) The signal processing device according to claim 2, wherein said characteristic value characterizing said commercial message is the number of changes of the state of the signal in the commercial message section.

12. (Previously Presented) The signal processing device according to claim 2, wherein said characteristic value characterizing said commercial message is the time of the change of the state of the signal in the commercial message section.

13. (Canceled)

14. (Previously Presented) The signal processing device according to claim 1, wherein said index is an edited signal obtained by editing said commercial message.

15. (Previously Presented) The signal processing device according to claim 14, wherein said edited signal obtained by editing said commercial message comprises a set of signals at the time when the state of said commercial message changes.

16. (Previously Presented) The signal processing device according to claim 14, wherein said edited signal obtained by editing said commercial message comprises a signal

representing one of a starting part of said commercial message and an ending part of said commercial message.

17. (Previously Presented) The signal processing device according to claim 1, wherein said index information extracting means extracts for the index a portion of the commercial message at a time when the state of said commercial message changes.

18. (Previously Presented) The signal processing device according to claim 2, further comprising a comparing means for comparing the characteristic values respectively characterizing two commercial messages recorded by said recording means and discarding one of the recorded two commercial messages when the characteristic values of the two commercial messages are determined to be substantially the same.

19. (Previously Presented) The signal processing device according to claim 18, wherein said comparing means detects agreement/disagreement of the two commercial messages in a part of the commercial message section or in the entire commercial message section by comparing said characteristic values.

20. (Previously Presented) The signal processing device according to claim 18, wherein said comparing means detects the degree of similarity of the two commercial messages in a part of the commercial message section or in the entire commercial message section by comparing said characteristic values.

21. (Previously Presented) The signal processing device according to claim 18, wherein said comparing means performs the comparing operation on a basis of a distance as determined by using a predetermined distance scale between vectors corresponding to the two commercial messages , the respective vector of each of the two commercial messages formed from at least one of the amplitude of the signal in the commercial message section,

the spectrum of the signal in the commercial message section, the linear prediction coefficient of the signal in the commercial message section, the histogram of a predetermined component of the signal in the commercial message section, the mean value of the predetermined component of the signal in the commercial message section, a difference between two predetermined signal components of the signal in the commercial message section, the number of changes in the state of the signal in the commercial message section and the time of a change in the state of the signal in the commercial message section.

22. (Previously Presented) The signal processing device according to claim 1, wherein said user-selectable index is one of a plurality of user-selectable indices each of which correspond to an extracted signal from said input signal, said display means displays each of said indices, and further comprising:

an index information selecting means for selecting one index from said displayed plurality of indices; and

a retrieving means for retrieving one of the recorded extracted signals corresponding to said selected one index.

23. (Previously Presented) The signal processing device according to claim 2, further comprising:

a retrieving means for retrieving one of the recorded extracted signals substantially agreeing with said commercial message from said recording means, using said commercial message in a part of the section or in the entire section or a characteristic value characterizing the commercial message as a retrieving condition.

24. (Previously Presented) The signal processing device according to claim 2, further comprising:

a retrieving means for retrieving one of the recorded extracted signals substantially agreeing with said commercial message from said recording means, using a part or all of said commercial message or a characteristic value characterizing the commercial message as retrieving condition.

25. (Previously Presented) The signal processing device according to claim 1, further comprising:

a measuring means for measuring the number of times and/or the hours of appearances of a same commercial message.

26. (Previously Presented) The signal processing device according to claim 1, further comprising:

a measuring means for measuring the number of times and/or the hours of appearances of similar commercial messages.

27. (Previously Presented) A signal processing method comprising the steps of:

detecting a commercial message section from an input signal containing at least the commercial message section and the remaining signal section on a time division basis;

extracting a commercial message of the commercial message section out of the input signal in accordance with the result of the detection of the commercial message section;

recording each commercial message extracted from the input signal by the commercial message extracting means;

extracting information from said commercial message section to be used as a user-selectable index representing said recorded commercial message, the information extracted

from said commercial message section and associated with said commercial message being one of a starting image, a cut point image, a starting sound or an ending sound; and

displaying said index.

28. (Previously Presented) The signal processing method according to claim 27, further comprising the steps of:

extracting a characteristic values characterizing the commercial message from the detected commercial message section; and

each characteristic values of the commercial message in association with the commercial message.

29. (Previously Presented) The signal processing method according to claim 27, wherein said commercial message section detecting step is adapted to detect said commercial message section from said input signal on the basis of a characteristic pattern of the commercial message appearing in said input signal at predetermined time intervals and a characteristic value reflecting the probability of the commercial message appearing in the input signal.

30. (Previously Presented) The signal processing method according to claim 27, wherein

said commercial message section detecting step comprises detecting said commercial message section on a basis of predetermined guide information which is prepared to correspond to said input signal.

31. (Previously Presented) The signal processing method according to claim 28, wherein said characteristic value characterizing said commercial message is amplitude of the signal in the commercial message section.

32. (Previously Presented) The signal processing method according to claim 28, wherein said characteristic value characterizing said commercial message is a spectrum of the signal in the commercial message section.

33. (Previously Presented) The signal processing method according to claim 28, wherein said characteristic value characterizing said commercial message is a linear prediction coefficient of the signal in the commercial message section.

34. (Previously Presented) The signal processing method according to claim 28, wherein said characteristic value characterizing said commercial message is a histogram of a predetermined component of the signal in the commercial message section.

35. ((Previously Presented) The signal processing method according to claim 28, wherein said characteristic value characterizing said commercial message is a mean value of a predetermined component of the signal in the commercial message section.

36. (Previously Presented) The signal processing method according to claim 28, wherein said characteristic value characterizing said commercial message is a difference between two predetermined signal components of the commercial message in the commercial message section.

37. (Previously Presented) The signal processing method according to claim 28, wherein said characteristic value characterizing said commercial message is the number of changes of the state of the signal in the commercial message section.

38. (Previously Presented) The signal processing method according to claim 28, wherein said characteristic value characterizing said commercial message is the time of the change of the state of the signal in the commercial message section.

39. (Canceled)

40. (Previously Presented) The signal processing method according to claim 27, wherein said index is an edited signal obtained by editing said commercial message.

41. (Previously Presented) The signal processing method according to claim 40, wherein said edited signal obtained by editing said commercial message comprises a set of signals at the time when the state of said commercial message changes.

42. (Previously Presented) The signal processing method according to claim 40, wherein said edited signal obtained by editing said commercial message comprises a signal representing one of a starting part of said commercial message and an ending part of said commercial message.

43. (Previously Presented) The signal processing method according to claim 27, wherein said index information extracting step-comprises extracting as the index a portion of the commercial message at a time when the state of said commercial message changes.

44. (Previously Presented) The signal processing method according to claim 28, further comprising comparing the characteristic values respectively characterizing two commercial messages recorded by said recording means and discarding one of the recorded two commercial messages when the characteristic values of the two commercial messages are determined to be substantially the same.

45. (Previously Presented) The signal processing method according to claim 44, wherein said comparing step is adapted to detect the agreement/disagreement of the two commercial messages in a part of the commercial message section or in the entire commercial message section by comparing said characteristic values.

46. (Previously Presented) The signal processing method according to claim 44, wherein said comparing step is adapted to detect the degree of similarity of the two commercial messages in a part of the commercial message section or in the entire commercial message section by comparing said characteristic values.

47. (Previously Presented) The signal processing method according to claim 44, wherein said comparing step comprises comparing the characteristic values respectively characterizing the two commercial messages on the basis of the distance as determined by using a predetermined distance scale between vectors corresponding to the two commercial messages, the respective vector of each of the two commercial messages formed from at least one of the amplitude of the signal in the commercial message section, the spectrum of the signal in the commercial message section, the linear prediction coefficient of the signal in the commercial message section, the histogram of a predetermined component of the signal in the commercial message section, the average value of a predetermined component of the signal in the commercial message section, a difference between two predetermined signal components of the signal in the commercial message section, the number of changes in the state of the signal in the commercial message section and the time of a change in the state of the signal in the commercial message section.

48. (Previously Presented) The signal processing method according to claim 27, wherein said user-selectable index is one of a plurality of user-selectable indices each of which correspond to an extracted signal from said input signal, said display means displays

each of said indices, and further comprising selecting one index from said displayed plurality indices; and retrieving one of the recorded extracted signals corresponding to said selected one index.

49. (Previously Presented) The signal processing method according to claim 28, further comprising a retrieving step for retrieving one of the recorded extracted signals substantially agreeing with said commercial message from said recording step, using said commercial message in a part of the section or in the entire section or a characteristic value characterizing the commercial message as a retrieving condition.

50. (Previously Presented) The signal processing method according to claim 28, further comprising a retrieving step for retrieving one of the recorded extracted signals substantially agreeing with said commercial message from said recording step, using a part or all of said commercial message or a characteristic value characterizing the commercial message as a retrieving condition.

51. (Previously Presented) The signal processing method according to claim 27, further comprising a measuring step for measuring the number of times and/or the hours of appearances of a same commercial message.

52. (Previously Presented) The signal processing method according to claim 27, further comprising a measuring step for measuring the number of times and/or the hours of appearances of similar commercial messages.

53. (Previously Presented) The signal processing device according to claim 1, wherein said input signal comprises a video signal and/or an audio signal and said commercial message covers a commercial message section.

54. (Previously Presented) The signal processing method according to claim 27, wherein said input signal comprises a video signal and/or an audio signal and said commercial message covers a commercial message section.

55. (Previously Presented) A signal processing device comprising:

a first signal section detecting means for detecting a first signal section from an input signal including at least the first signal section and the remaining signal section on a time division basis;

a first signal extracting means for extracting a first signal in the first signal section from the input signal in accordance with a result of the detection by the first signal section;

a recording means for recording each signal extracted from the input signal by the first signal extracting means, wherein said recording means includes a characteristic comparing means for comparing the first signal with each signal stored in the recording means and, in response to determining that the first signal is the same as another signal stored in the recording means, removing from the recording means one of the first signal or the other signal;

an index information extracting means for extracting information from said first signal section to be used as a user-selectable index representing said recorded first signal; and

a display means for displaying said index.

EVIDENCE APPENDIX

Appellants do not submit additional evidence with this appeal brief and no additional evidence has been submitted during prosecution.

RELATED PROCEEDINGS APPENDIX

Appellant is not aware of any related appeals or interferences with regard to the present application.